

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2001-NM-358-AD; Amendment 39-13163; AD 2003-11-04]

RIN 2120-AA64

Airworthiness Directives; McDonnell Douglas Model DC-10-10, DC-10-10F, DC-10-15, DC-10-30, DC-10-30F, DC-10-30F (KC-10A and KDC-10), DC-10-40, and DC-10-40F Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD), applicable to certain McDonnell Douglas airplanes, that requires inspections of the linear variable differential transducers (LVDTs) of the autopilot for discrepancies, and follow-on actions if necessary. This amendment is prompted by information from the manufacturer advising that certain LVDTs were delivered with an undersize nylok element on the threaded extension. The actions specified by this AD are intended to prevent failure of the LVDTs, which could result in an automatic pitch trim malfunction or an autopilot disconnect, and consequent reduced controllability of the airplane. This action is intended to address the identified unsafe condition.

DATES: Effective July 3, 2003.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of July 3, 2003.

ADDRESSES: The service information referenced in this AD may be obtained from Boeing Commercial Aircraft Group, Long Beach Division, 3855 Lakewood Boulevard, Long Beach, California 90846, Attention: Data and Service Management, Dept. C1-L5A (D800-0024). This information may be examined at the Federal Aviation Administration (FAA), Transport Airplane Directorate, Rules Docket, 1601 Lind Avenue, SW., Renton, Washington; or at the FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Ron Atmur, Aerospace Engineer, Airframe Branch, ANM-120L, FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California 90712-4137; telephone (562) 627-5224; fax (562) 627-5210.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an airworthiness directive (AD) that is applicable to certain McDonnell Douglas Model DC-10-10, DC-10-10F, DC-10-15, DC-10-30, DC-10-30F, DC-10-30F (KC-10A and KDC-10), DC-10-40, and DC-10-40F airplanes was published as a supplemental notice of proposed rulemaking (NPRM) in the Federal Register on March 17, 2003 (68 FR 12618). That action proposed to require inspections of the linear variable differential transducers (LVDTs) of the autopilot for discrepancies, and follow-on actions if necessary. That action also proposed to expand the applicability of the original NPRM.

Comments

Interested persons have been afforded an opportunity to participate in the making of this amendment. No comments were submitted in response to the proposal or the FAA's determination of the cost to the public.

Conclusion

The FAA has determined that air safety and the public interest require the adoption of the rule as proposed in the supplemental NPRM.

Changes to 14 CFR Part 39/Effect on the AD

On July 10, 2002, the FAA issued a new version of 14 CFR part 39 (67 FR 47997, July 22, 2002), which governs the FAA's airworthiness directives system. The regulation now includes material that relates to altered products, special flight permits, and alternative methods of compliance. However, for clarity and consistency in this final rule, we have retained the language of the supplemental NPRM regarding that material.

Cost Impact

There are approximately 394 Model DC-10-10, DC-10-10F, DC-10-15, DC-10-30, DC-10-30F, DC-10-30F (KC-10A and KDC-10), DC-10-40, and DC-10-40F airplanes of the affected design in the worldwide fleet. The FAA estimates that 252 airplanes of U.S. registry will be affected by this AD.

We estimate that it will take approximately 1 work hour per airplane to accomplish the inspection specified in Boeing Alert Service Bulletin DC10-22A126, at an average labor rate of \$60 per work hour. Based on these figures, the cost impact of that inspection required by this AD on U.S. operators is estimated to be \$15,120, or \$60 per airplane.

We estimate that it will take approximately 1 work hour per airplane to accomplish the inspections specified in Boeing Alert Service Bulletin DC10-22A127, at an average labor rate of \$60 per work hour. Based on these figures, the cost impact of these inspections required by this AD on U.S. operators is estimated to be \$15,120, or \$60 per airplane.

Should an operator be required to perform the follow-on actions specified in Boeing Alert Service Bulletin DC10-22A126, the cost estimates are as follows:

- Condition 2-Repair/inspect: 1 work hour per airplane at \$60 per work hour.
- Condition 4-Realign: 1 work hour per airplane at \$60 per work hour.
- Condition 5-Replace LVDT: 1 work hour per airplane at \$60 per work hour; estimated parts cost of \$900.
- Condition 6-Replace hangar: 1 work hour per airplane at \$60 per work hour; estimated parts cost of \$100.

Should an operator be required to perform the follow-on actions specified in Boeing Alert Service Bulletin DC10-22A127, the cost estimates are as follows:

- Option 1-Replace LVDT and do adjustment/test: 2 work hours per airplane at \$60 per work hour; estimated parts cost of \$900.
- Option 2-Install a heat shrinkable sleeve and inspect: 2 work hours per airplane at \$60 per work hour.

The cost impact figures discussed above are based on assumptions that no operator has yet accomplished any of the requirements of this AD action, and that no operator would accomplish those actions in the future if this AD were not adopted. The cost impact figures discussed in AD rulemaking actions represent only the time necessary to perform the specific actions actually required by the AD. These figures typically do not include incidental costs, such as the time required to gain access and close up, planning time, or time necessitated by other administrative actions.

Regulatory Impact

The regulations adopted herein will not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

For the reasons discussed above, I certify that this action (1) is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket at the location provided under the caption ADDRESSES.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39—AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. Section 39.13 is amended by adding the following new airworthiness directive:

AIRWORTHINESS DIRECTIVE



Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
**Federal Aviation
Administration**

We post ADs on the internet at "www.faa.gov"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2003-11-04 McDonnell Douglas: Amendment 39-13163. Docket 2001-NM-358-AD.

Applicability: Model DC-10-10, DC-10-10F, DC-10-15, DC-10-30, DC-10-30F, DC-10-30F (KC-10A and KDC-10), DC-10-40, and DC-10-40F airplanes; as listed in Boeing Alert Service Bulletin DC10-22A126, dated October 31, 2001; and Boeing Alert Service Bulletin DC10-22A127, dated December 17, 2001; certificated in any category.

Note 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (c) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent failure of the linear variable differential transducers (LVDTs) of the autopilot, which could result in an automatic pitch trim malfunction or an autopilot disconnect, and consequent reduced controllability of the airplane, accomplish the following:

Detailed Inspections/Follow-on Actions

(a) Within 90 days after the effective date of this AD: Do the detailed inspections of the LVDTs of the autopilot for discrepancies as required by paragraphs (a)(1) and (a)(2) of this AD.

Note 2: For the purposes of this AD, a detailed inspection is defined as: "An intensive visual examination of a specific structural area, system, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at intensity deemed appropriate by the inspector. Inspection aids such as mirror, magnifying lenses, etc., may be used. Surface cleaning and elaborate access procedures may be required."

(1) Inspect the LVDTs for affected serial numbers (with undersize nylok elements) per Figure 1 of Boeing Alert Service Bulletin DC10-22A127, dated December 17, 2001, excluding Evaluation Form. If any affected serial number is found, before further flight, do either Option 1 (including replacing the LVDT with a new LVDT and doing an automatic pitch trim adjustment/test), or Option 2 (including installing a heat-shrinkable sleeve over the LVDT jamnut and doing repetitive inspections for any loose jamnut every 500 flight hours until the LVDT is replaced with a new

LVDT), of Condition 1 of the service bulletin, per the service bulletin. If any discrepancy is found, before further flight, replace the LVDT with a new LVDT. If no discrepancy is found, no further action is required by this paragraph.

(2) Inspect the shear rivets of the LVDTs of the drive assembly of the automatic pitch trim for discrepancies (shearing and/or looseness), per Boeing Alert Service Bulletin DC10-22A126, dated October 31, 2001, excluding Evaluation Form. If any discrepancy is found, before further flight, do Conditions 2 through 6 (including repairing the driver assembly and inspecting the LVDT within 9 months after doing the repair; doing an automatic pitch trim adjustment/test; aligning the LVDT; replacing the existing LVDT with a new LVDT; and replacing the hangar assembly with a new assembly), as applicable, of the service bulletin, per the service bulletin. If no discrepancy is found, no further action is required by this paragraph.

Part Installation

(b) As of the effective date of this AD, no one may install an LVDT with a serial number listed in the "Affected Serial Numbers" table in Figure 1 of Boeing Alert Service Bulletin DC10-22A127, dated December 17, 2001, excluding Evaluation Form, on any airplane.

Alternative Methods of Compliance

(c) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Los Angeles Aircraft Certification Office (ACO), FAA. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Los Angeles ACO.

Note 3: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Los Angeles ACO.

Special Flight Permits

(d) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(e) The actions shall be done in accordance with Boeing Alert Service Bulletin DC10-22A126, dated October 31, 2001, excluding Evaluation Form; and Boeing Alert Service Bulletin DC10-22A127, dated December 17, 2001, excluding Evaluation Form; as applicable. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Boeing Commercial Aircraft Group, Long Beach Division, 3855 Lakewood Boulevard, Long Beach, California 90846, Attention: Data and Service Management, Dept. C1-L5A (D800-0024). Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

Effective Date

(f) This amendment becomes effective on July 3, 2003.

Issued in Renton, Washington, on May 21, 2003.

Ali Bahrami,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 03-13223 Filed 5-28-03; 8:45 am]

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